Air Quality Group

HAZARD CONTROL PLAN AND WORK AUTHORIZATION

This form is from ESH-17-035

1. Describe the work to be performed (use continuation page if needed) or give procedure number, revision number, and title.

HCP-ESH-17-TA53-MI, R1 Title: Maintenance & Inspection of air emissions sampling equipment and monitoring instrumentation at TA-53. Includes work on pipes, gauges, probes, and other associated sample systems, as well as detectors, chart recorders, and other monitoring systems.
Associated procedures: 53 FMP 104-3, -10, -12; and ESH-17-604.

2. Describe potential hazards associated with the work (use continuation page if needed).

All hazards as described in HCP-ESH-17-TA53-XA, as supplemented and superseded by:
1) Radiological hazards - contamination of internal components of sample systems is possible
2) hand tools - nicks, cuts, bruises from using tools
3) ladders, scaffolding - slips & falls from equipment
4) electrical
   a) gauges have associated pressure transducers & 12 V power supplies which are handled during annual system exchanges. Photohelic gauges have AC power & relays included
   b) Kanne ionization chambers have 300 VDC batteries as power supplies
   c) High-purity Germanium (HPGe) detector systems have a 3500 VDC power supply, which can be disconnected & re-connected during system troubleshooting & repair.
   d) chart recorders are AC powered and have associated DC voltage signals (less than 10 VDC)

3. For each hazard, list the likelihood and severity, and the resulting initial risk level (before any work controls are applied, as determined according to LIR300-00-01.0, section 7.2)

1) Rad: occasional / negligible = Minimal
2) hand tools: occasional / moderate = Low
3) ladders, scaffolding: occasional / moderate = Low
4) electrical
   a) transducers - occasional / moderate = Low
   b) batteries - occasional / moderate = Low
   c) HPGe HVPS - improbable / moderate = Minimal
   d) chart recorders - occasional / moderate = Low

Overall *initial* risk: ☐ Minimal ☒ Low ☐ Medium ☐ High

4. Applicable Laboratory, facility, or activity operational requirements directly related to the work:

☒ None ☐ List: Work Permits required? ☐ No ☒ List:

No Radiological work permit is required for routine replacement of sample system components, due to historical process knowledge & controls in applicable procedures. Consult with TA-53 ESH-1 (667-7069) for applicability of RWP to other work on sample systems (pulling probes, cutting into lines, etc).

5. Describe how the hazards listed above will be mitigated (e.g., safety equipment, administrative controls, etc.):

1) radiological - wear gloves (or other PPE as recommended by ESH-1) prior to handling anything that has been exposed to the emissions air stream. Have all such components reviewed by ESH-1 prior to removal from any controlled area. Consult with TA-53 ESH-1 (667-7069) for applicability of RWP to other work on sample systems (pulling probes, cutting into lines, etc).
2) hand tools - use common sense and work in a calm, unhurried fashion.
3) ladders - be sure the ladder is well-footed & on a level surface; do not attempt to lean out from ladder or scaffolding or to carry heavy loads on ladders; safely tie off extension ladders

** see continuation page **

6. Knowledge, skills, abilities, and training necessary to safely perform this work (check one or both):

☒ Group-level orientation (per ESH-17-032) and training to applicable procedure.

☒ Other → Describe:

-All as stated in HCP-ESH-17-HCP-XA, as supplemented and superseded by:
- Rad Worker II is required for work on potentially contaminated systems
- Ladder safety training is offered through the training office (EDS #12985) and is suggested for workers who use ladders extensively.
- Documentation by supervisor of training or appropriate knowledge and skills to work on de-energized electrical equipment.

7. Any wastes and/or residual materials? (check one) ☐ None ☒ List:

Used batteries may be disposed of in normal trash (per instructions from Eveready representative). If oil is spilled from sampling pump during handling, contact JCNNM or facility spill coordinator for assistance.

8. Considering the administrative and engineering controls to be used, the *residual* risk level (as determined according to LIR300-00-01.0, section 7.3.3) is (check one):

☐ Minimal ☒ Low ☐ Medium (requires approval by Division Director)

9. Emergency actions to take in event of control failures or abnormal operation (check one):

☒ None ☐ List:

During LANSCE accelerator operation, the Central Control Room (CCR) and ESH-1 offices are staffed 24 hours, 7 days. Contact these offices for assistance as needed.

CCR: 667-5729; Building 4, room 203.

ESH-1 Field Office: 667-7069, Building 395, room 101.

After this form is approved, perform the work safely. Identify opportunities for improvements in safety and report these to the safety officer or group leader.

Preparer(s) signature(s)	Name(s) (print) /Position	Date

[NOTE: Training to a procedure constitutes authorization.] **If this work is NOT described by a procedure:** I have reviewed the safety of this proposed work with the group safety officer and I commit to follow safe practices when performing this work.

Employee signature	Name (print)	Date
Additional employee signature (optional)	Name (print)	Date
Additional employee signature (optional)	Name (print)	Date

Group leader or safety officer review.

I have reviewed the proposed work with 1) the preparer(s) and 2) employees who will perform the work (if not described in a procedure) and I believe the hazards and safety concerns have been adequately addressed. The work as described above is hereby authorized. This authorization expires one year after the date below.

Group leader or safety officer signature	Name (print)	Date

This plan will be revised according to ESH-17-035. Group leader or safety officer: After completion, submit to ESH-17 Records Coord.

Hazard Control Plan continuation page. Give item number being continued.

Item 5, Hazard Mitigation

4) electrical - a, c, & d) never work on live AC circuits, always isolate power supplies prior to work on systems. Isolate DC power supplies prior to handling circuitry. Remove high-voltage power supply module from NIM-bin prior to handling HPGe HV connections
b) for batteries, handle with care. Isolate batteries behind shield during normal operations.